



# EDITORIAL

Letter from the Provost and Executive Vice President for Academic Affairs and Diversity, Dr. Debashish (Deba) Dutta



The integration of teaching and research was introduced early in the 19th century by Prussian philosopher and diplomat Wilhelm von Humboldt. Today, this brilliant model for higher education is echoed in research universities around the world. The traditional practice places university

discoveries squarely in the hands of faculty members and graduate students. But times have changed: At Purdue, thousands of undergraduate students are conducting critically important hands-on research in nearly every college.

In this sixth edition, you will find the most comprehensive content yet published in the *Journal of Purdue Undergraduate Research* (JPUR). Undergraduates have explored such areas as mitochondrial dysfunction in Parkinson's disease; how caregivers interact with hearing-impaired infants; and what acreage and yield is required to supply produce to Purdue's food courts, creating income for local farmers and saving money for the University. The research conducted by our undergraduates advances new knowledge, while also benefiting the students who worked hard to obtain it.

Also included in this edition of JPUR is a new feature on Purdue alumni who published articles in the 2011 inaugural volume. You'll find out what they're doing today and how their undergraduate research experience contributed to their career

success. In the "Out of the Box" feature, you'll learn about the Purdue Paleography Project, where never-before-available transcriptions and translations of Latin manuscripts bring words from a scribe's hand to the digital age.

JPUR is a student-run publication with outstanding support from members of the Purdue University Scholarly Publishing Division, Purdue Libraries, the Online Writing Lab, and Purdue Marketing and Media. These areas collaborated beautifully—reviewing 44 submissions—to bring this volume to you.

Students whose research is selected for the journal participate actively in the publishing process. As they refine their research results, they learn how to craft well-defined conclusions into concise scholarly papers. This discipline of clear, organized writing will serve them well throughout their lives.

Some of the greatest benefits of undergraduate research are not found in this or any journal—they are the relationships formed between students and their professors who guide, coach, and support them through the discovery process. I wish to personally thank these faculty members, many of whom remain mentors long after our students leave the classroom, library, and lab.

The unity of teaching and research has stood the test of time, its immense value proven long since Wilhelm von Humboldt conceived the notion. We hope you enjoy the sixth edition of JPUR, a publication whose content represents the hope of the future from roots planted deep in an idea two centuries ago.

## FIND OUT MORE ABOUT UNDERGRADUATE RESEARCH AT PURDUE



Read more about student Discovery Makers at Purdue and their experiences of undergraduate research:

<http://purdue.edu/discoveru>



Browse articles online: [www.jpur.org](http://www.jpur.org)

Follow JPUR on Twitter: [www.twitter.com/ResearchPurdue](https://www.twitter.com/ResearchPurdue)

Like JPUR on Facebook: [www.facebook.com/ResearchPurdue](https://www.facebook.com/ResearchPurdue)